

A NEW STAGMOMANTIS FROM FLORIDA.

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From Delaware southward through the Gulf States to Texas and northward to Kansas and southern Indiana there is a species of Mantis known as *Stagmomantis carolina* (Linnæus).^{*} This insect is subject to great variation in color, the females more so than the males. Green or brown specimens are most common, but there are also individuals with pink wings and still others that have them yellow in color. Sometimes the contrasting colors are exceedingly beautiful, and among so much variation it is no wonder that several names have been bestowed upon the insect. The tegmina of *Stagmomantis carolina* covers about two-thirds of the abdomen in the females, and the discal dark spot is conspicuous. In the author's collection there are twenty-eight female *carolina* collected from Maryland to Texas, that are alike in the features mentioned, except that those from the northern part of the range of the species are usually smaller than those from further south.

While collecting in Florida in 1911, 1912 and 1913, mantids were found that had shorter tegmina and a more slender pronotum than usual, and they were examined with much interest, but the few examples secured at that time were labeled *carolina*. However, more specimens have since been received from Florida, and I have, through the kindness of Messrs. Rehn and Hebard, of the Philadelphia Academy of Natural Sciences, been able to examine their extensive series. From this study it is evident that two species of *Stagmomantis* inhabit Florida, and the one with short tegmina appears to be undescribed.

Stagmomantis floridensis, new species.

Type female, Punta Gorda, DeSoto County, Florida, November 13, 1911 (Davis). Davis collection.

Allotype male, Parish, Manatee County, Florida, September 24, 1918 (Joseph Lienhart). Davis collection.

The type, and all of the other females of this species so far

^{*} A very complete bibliography of this species by Mr. and Mrs. Rau is contained in the Trans. Acad. Sci., St. Louis, vol. xxii.

examined are green, the tegmina are green, often with the front margin yellowish; the discal spot is also yellowish and not conspicuous; the hind wings are yellowish and tessellate on the outer half or third only, the basal portion and front margin of an even color with no translucent spaces. In female *carolina* the discal spot of the tegmina is conspicuous and the hind wings are tessellate over a much wider area, sometimes to the base of the wings. In *floridensis* the abdomen of the female is tapering, of the same general size over much of its length, and the tegmina extend about one-half the way down. In female *carolina* the abdomen is more fusiform, broadest at about the fourth segment, and the tegmina cover all but the apical third. The shape of the abdomen in *floridensis* and size of the tegmina is more as in the genus *Phasmomantis*, and the species is certainly an approach to that genus. The pronotum is slender in *floridensis* and its greatest width is contained in its length a little over five times, whereas in *carolina* the pronotum is more robust, and the greatest width is contained in its length about four times. The head is proportionately smaller in the new species than in *carolina*. These differences are brought out in the figures.

In the male allotype and in a paratype male the tegmina are hyaline and the stigma is absent; the wings are also hyaline with about four rows of fuscous spots along the hind margin. The pronotum is more slender than in *carolina*, as already described for the female. The arrangement of the spines on the front legs is the same in both species. The hooks of the genitalia of the male are short and stout, whereas in *carolina* they are long.

MEASUREMENTS IN MILLIMETERS.

	Female Type.	Male Allotype.
Length of body	71	62
Length of pronotum	27.5	22
Greatest width of pronotum	5	4.5
Length of tegmen	24	38
Length of cephalic femur	18.5	13.5
Length of median femur	18	13
Length of caudal femur	21	17

In addition to the type and allotype, the following specimens have been examined: In the collection of the Philadelphia Aca-

demy of Natural Sciences; Pablo Beach, Fla., September 27, 1913, female (W. T. Davis); Carrabelle, Fla., September 23, 1915, female (Rehn and Hebard). The following in the author's collection: Pablo Beach, Fla., September 5, 1913, female; La Grange, Brevard Co., Fla., October, 1913, female; Everglade, Lee Co., Fla., July, 1912, female; Parish, Manatee Co., Fla., four females collected from October 2 to 20, 1916 (Joseph Lienhart), also collected at same place September 24, 1918, female; October 7, 1918, female and September 29, 1918, male.

While these dates are all in the late summer or fall, mature female mantids are to be found in the spring as well, for we collected *Stagmomantis carolina* at Everglade, Lee Co., Florida, in April, 1912. Of this last species we have Florida specimens from South Jacksonville, New Augustine, La Grange, Corinardo, Big Pine Key, Punta Gorda and Parish. This and *Stagmomantis floridensis* are associated and appear to be about equally common.

As the species of the genus *Stagmomantis* have become much confused in literature it may be well to further consider some of the relatives of *S. floridensis*. In Kirby's catalogue of 1904 the several synonyms of *S. carolina* mentioned appear from a further examination of the descriptions to be such, and most of them were also so recorded by Mr. Scudder in his catalogue of 1900.

In 1813 Casper Stoll described *Mantis carolina* in Spectres, Mantis, and gave on plate 24 figure 91 a picture of the female in the brown phase. He also shows on the same plate in figure 92 a female of a species from Georgia and Virginia of what we now known to be the same insect in the green phase. Stoll considered this last a male, probably because the abdomen was not as stout as in the brown example. As the name *carolina* was preoccupied, Saussure in 1869 called the species represented by figure 92, which he considered distinct, *stollii*, and Kirby so lists it from Georgia, Virginia and Cuba. Mr. Scudder in his catalogue considered *stollii* a synonym of *carolina* Linnæus, which appears to be correct.

In 1859 Saussure described *S. ferox* from Carolina and Mexico; later (1872) he considered it a variety of *dimidiata*, and still later in Bio. Centr.-Amer., 1894, he and Zehntner dropped the variety name and state that *dimidiata* Burmeister is found in

